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ABSTRACT

Three elementary-aged students with severe, multiple disabilities acquired basic communication and motor objectives within cooperative learning activities conducted in their regular education classrooms. With gradually fading assistance from the instructor, the nondisabled members of the cooperative learning groups provided cues, prompts, and reinforcement to promote the learning of the disabled member. Results showed that the three students with disabilities not only independently demonstrated targeted basic skills within cooperative academic activities, but also generalized those skills during follow-up sessions to activities with other members of a newly formed cooperative learning group. In addition, tests of achievement of targeted academic objectives by the nondisabled members of their cooperative learning groups indicated that they performed as well as members of a control group within the classroom that did not include a child with severe disabilities. The study concluded that, within the structure of cooperative learning groups, there appears to be adequate opportunity, support, and motivation for learning basic communication and sensorimotor skills by students with severe, multiple disabilities. (Author/JDD)

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Acquisition of Communication and Motor Skills within the Context of Cooperative Learning Groups in General Education Classrooms

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Abstract

Three elementary-aged students with severe, multiple disabilities acquired basic communication and motor objectives within cooperative learning activities conducted in their regular education classrooms. With gradually fading assistance from the instructor, the nondisabled members of the cooperative learning groups provided cues, prompts, and reinforcement to promote the learning of the disabled member. The results showed that the three students with disabilities not only independently demonstrated targeted basic skills within cooperative academic activities, but also generalized those skills during follow-up sessions to activities with other members of a newly formed cooperative learning group. In addition, tests of achievement of targeted academic objectives by the nondisabled members of their cooperative learning groups indicated that they performed as well as members of a control group within the classroom that did not include a child with severe disabilities.

Acquisition of Communication and Motor Skills within the Context of Cooperative Learning Groups in General Education Classrooms

This study was designed to investigate the extent to which three students with severe disabilities acquired basic communication, social, and sensori-motor skills in the midst of ongoing academic activity in their general education classrooms. That is, could academic activities in general education classrooms provide the opportunity, support and motivation needed for the students to learn the basic skills objectives on their IEPs?

In addition, we analyzed the effectiveness of their nondisabled classmates as facilitators of the skill development of the student with disabilities.

And finally, we investigated whether the nondisabled students who were facilitating the basic skill development of their disabled classmate acquired the academic skills targeted by their teacher to the same degree as nondisabled classmates who were not participating with a child with disabilities during academic activities.

Participants

The participants in this study were three students, Adam, Jessica, and Vickram, who were full-time members of second and third grade classrooms in three elementary schools in the San Francisco Bay Area. Adam and Jessica experienced severe intellectual and physical disabilities, and Adam had limited vision. Vickram displayed autistic behaviors and hyperactivity and was diagnosed as severely intellectually disabled.

The three participating elementary classrooms were selected not only because they included a student with severe disabilities but also because the teacher in each classroom utilized cooperative learning strategies on a regular basis to teach math, language, and social studies. The cooperative learning criteria we looked for included the following (Johnson & Johnson, 1987):

- students in the group worked together to achieve educational goals;
- the groups represented a heterogeneous mix of students;
- there was shared leadership within the group, and each member had an assigned role;
- both social and academic objectives were targeted;
- there was both individual and group accountability; and
- there was a group self-evaluation process.

Procedures

The first task for implementing this study was to select the basic skills that Adam, Jessica, and Vickram would be learning. We reviewed the IEP for each student with his or her teacher and selected one motor and one communication/social objective. The educational objectives targeted for Adam included passing needed materials to his groupmates and smiling to acknowledge a friend's greeting. Jessica's targeted objectives included passing materials to her groupmates and responding to the question, "Do you want a turn?" by hitting a switch which activated the recorded message, "Yes, I want a turn!". Finally, the educational objectives targeted for Vickram included passing out materials and responding to the question, "Vickram, do you want a turn?" by touching a "yes" symbol on his desk.

The general education teachers then identified the academic skills that the nondisabled members of the cooperative learning groups would be learning and developed a test to determine the level of achievement of those skills. And, finally, all of the students in each of the classrooms were randomly assigned to seven or eight different cooperative learning groups.

The academic topic selected for the cooperative learning unit was math, and manipulatives were used to teach the concepts. The general education teachers gave the pretest for the math concepts they would be teaching prior to the start of the study.

The study coordinator met with each of the groups of nondisabled classmates who had either Adam, Jessica, or Vickram in their group and provided information to them on how they could assist the students to achieve their motor and communication objectives. Specifically, the nondisabled groupmates learned to provide cues to the student with disabilities to elicit the targeted behaviors, to give some physical assistance to them so that they could respond successfully, and then to provide positive feedback to the student when the behaviors were attempted.

Each day before the cooperative learning groups began their activities, the study coordinator briefly reminded the nondisabled members of the group to use the facilitation strategies.

Results

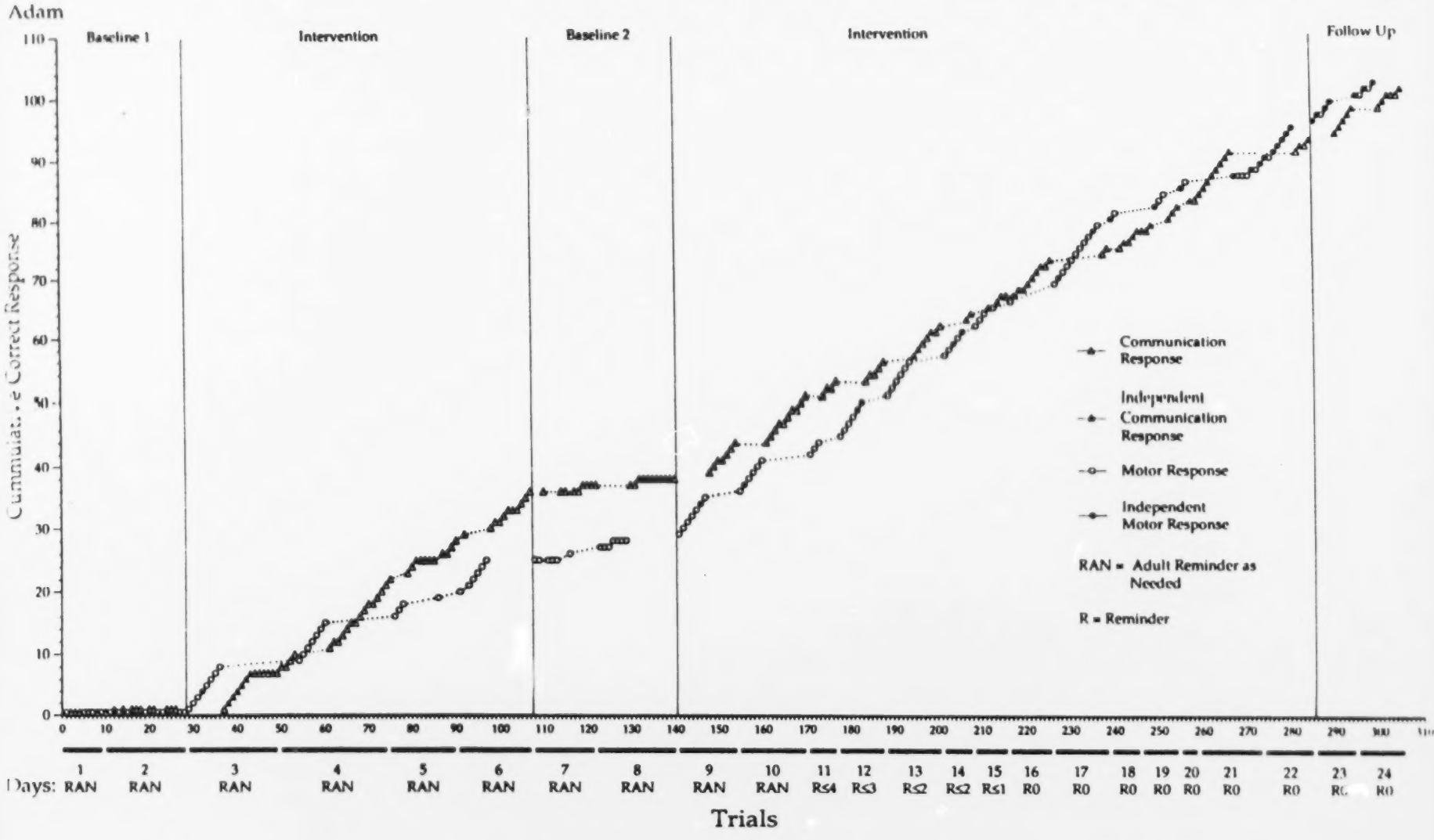
As is shown in the three figures that are attached, Adam, Jessica, and Vickram learned each of the targeted basic skills during math activities in their cooperative learning group. By the end of the study they no longer required any physical assistance from classmates to pass materials, greet their friends, or ask for a turn. In addition, the study coordinator was providing very few reminders to the nondisabled

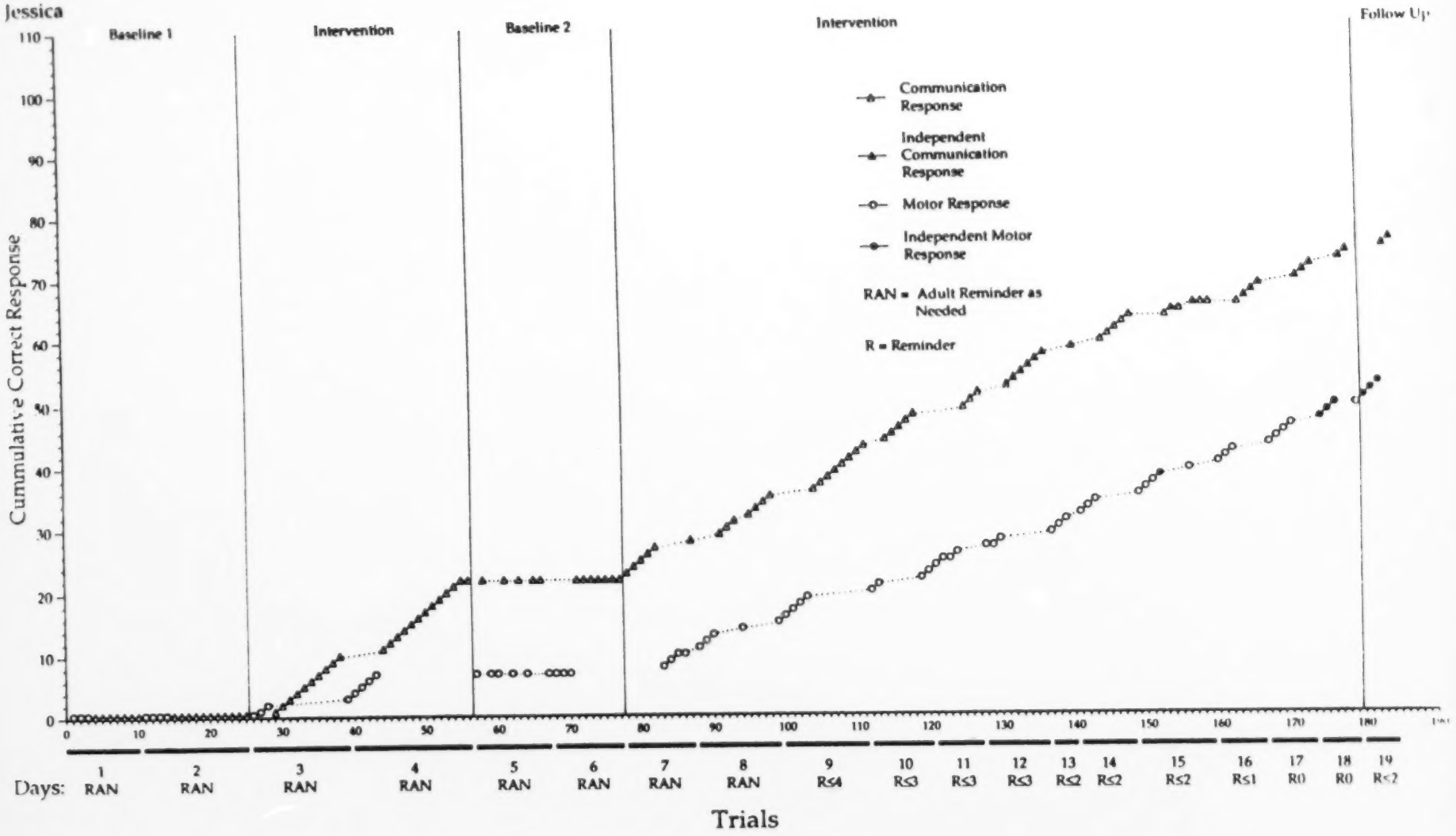
groupmates to provide the cues and positive feedback that assisted the students to participate successfully. And finally, tests of achievement by the nondisabled members of the group of the objectives identified for each academic unit indicated that the students performed as well as members of a control group within the classroom that did not include a student with disabilities.

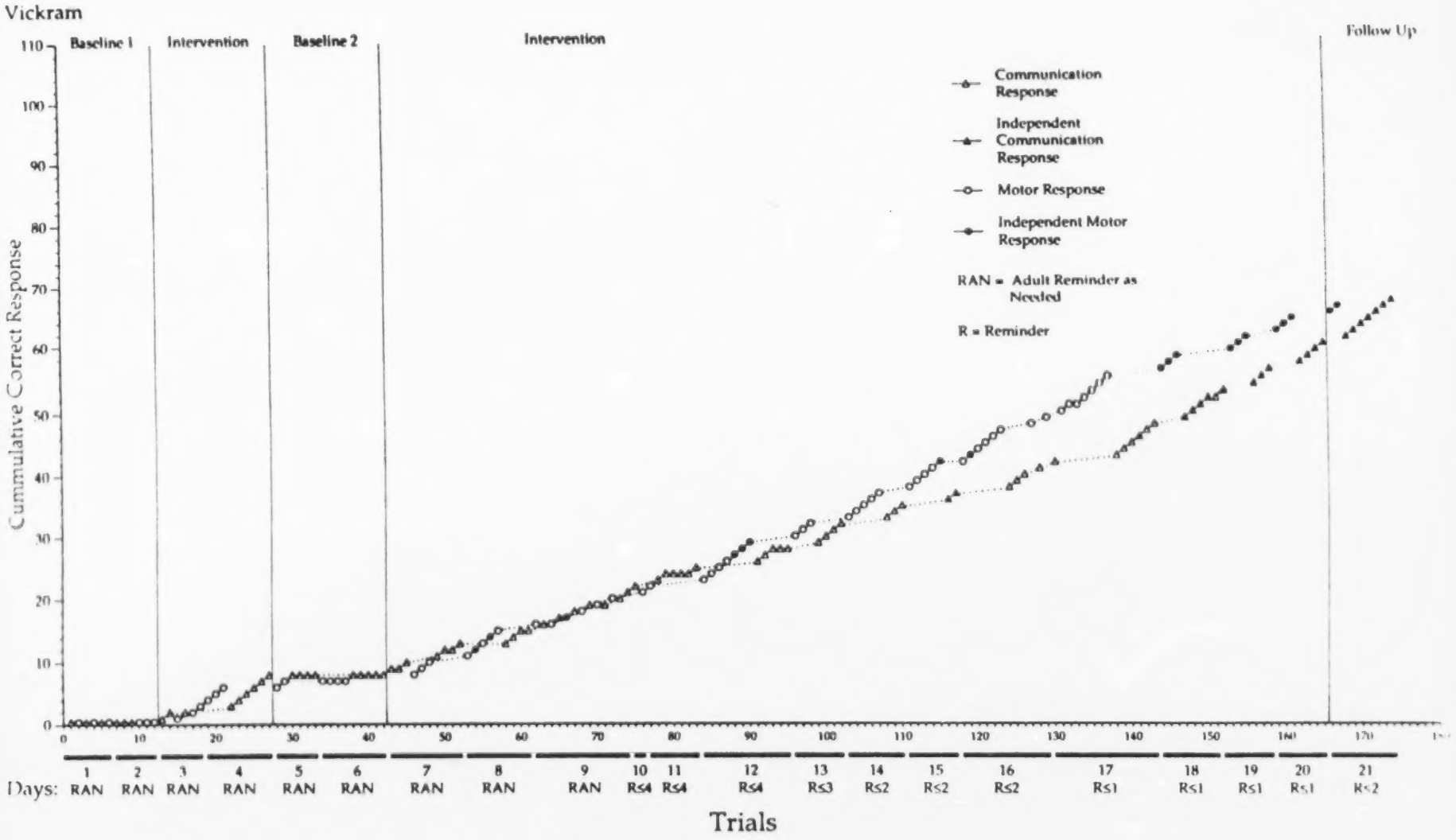
Conclusion

These results suggest that students with severe disabilities can learn basic skills in the midst of academic activity at is taking place in their general education classroom. That is, at least within the structure of cooperative learning groups, there appears to be adequate opportunity, support and motivation for learning basic communication and sensori-motor skills.

It is the challenge of educators who participate in, support, and promote the full inclusion of students with severe disabilities in general education classrooms to contribute to the design of instructional contexts and processes that allow students with varying levels of skill development to participate successfully in the academic activities of the school day.


Adam
Baseline 1
Intervention
Baseline 2
Intervention
Follow Up
Communicative Correct Response
Communication Response
Independent Communication Response
Motor Response
Independent Motor Response
RAN = Adult Reminder as Needed
R = Reminder
Days: 1 RAN 2 RAN 3 RAN 4 RAN 5 RAN 6 RAN 7 RAN 8 RAN 9 RAN 10 RAN 11 R≤4 12 R≤3 13 R≤2 14 R≤2 15 R≤1 16 R0 17 R0 18 R0 19 R0 20 R0 21 R0 22 R0 23 R0 24 R0
Trials


Jessica
Baseline 1
Intervention
Baseline 2
Intervention
Follow Up
Communication Response
Independent Communication Response
Motor Response
Independent Motor Response
RAN = Adult Reminder as Needed
R = Reminder
Cummulative Correct Response
Days:
1 RAN
2 RAN
3 RAN
4 RAN
5 RAN
6 RAN
7 RAN
8 RAN
9 R≤4
10 R≤3
11 R≤3
12 R≤3
13 R≤2
14 R≤2
15 R≤2
16 R≤1
17 R0
18 R0
19 R<2
Trials


Vickram
Baseline 1
Intervention
Baseline 2
Intervention
Follow Up
Communication Response
Independent Communication Response
Motor Response
Independent Motor Response
RAN = Adult Reminder as Needed
R = Reminder
Cummulative Correct Response
Days:
1 RAN
2 RAN
3 RAN
4 RAN
5 RAN
6 RAN
7 RAN
8 RAN
9 RAN
10 R≤4
11 R≤4
12 R≤4
13 R≤3
14 R≤2
15 R≤2
16 R≤2
17 R≤1
18 R≤1
19 R≤1
20 R≤1
21 R≤2
Trials